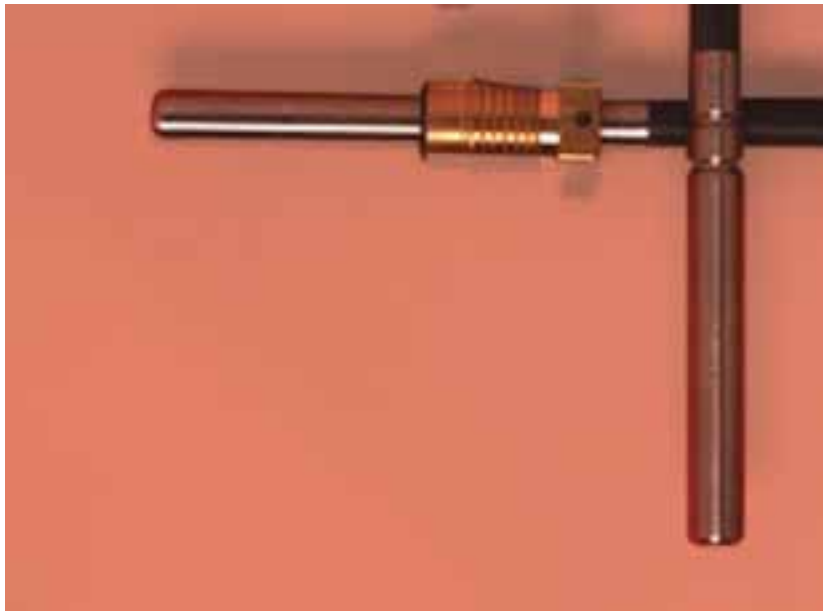


A small rapid temperature sensor for direct mounting or for mounting in pockets

Temperature sensor ELSTER TL045 data sheet



Features

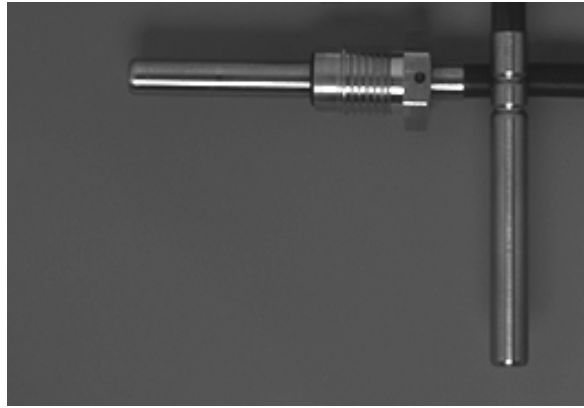
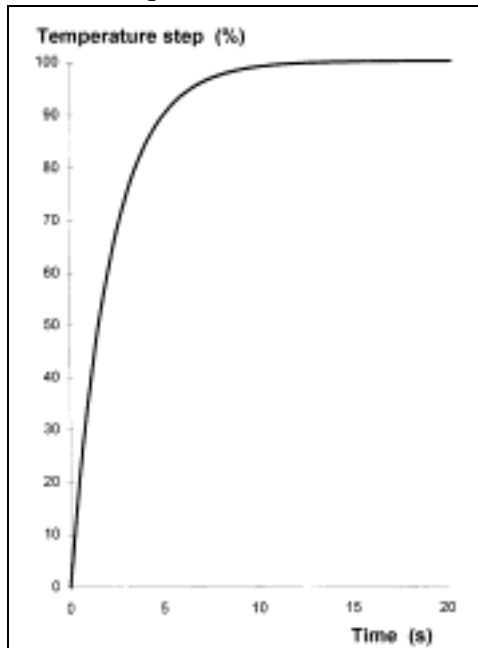
This small sensor consists of a Pt100 / Pt500 resistor, capsuled in a metal shield. Sensors for direct mounting in the flow have the designation TD and sensors for mounting in pockets have the designation TL. An exception from this is TL045 which can be used both for direct mounting together with a mounting kit and also (without this kit) for mounting in pockets. The sensors are delivered, as standard, with a 2 metres cable. They can be mounted in a flow sensor or in ball valves or T-tubes.

Advantages

The sensors follow the European standard EN1434 and have an extreme short response time due to the small thermal mass.

The sensors are delivered in pairs with permitted difference of max. 0,05 °K and providing a median of 0,02 °K in production and by final inspection.

Thermal response



Mounting

It is strongly recommended that the pair of sensors are mounted in identical way using T-pieces or ball-valves alternatively. The equality in mounting and performance will support the accuracy in measurement of temperature difference.

The ball valves offer the possibility to exchange the sensors without big loss of water. The installation must be properly sealed.

Test certificates can be supplied for delivery lots of more than 25 pairs

Technical data

| | |
|------------------------|----------------------------|
| Sensor type | Pt100/Pt500 |
| Resistance acc. to | IEC751 |
| Max RMS sensor current | 8 mA |
| Measuring range | 0 - 140 °C |
| Tolerance | Class B |
| Temp. difference | 2 – 100 °C |
| Temp. Step response | 1,8 sekunder |
| Min. immersion depth | 20 mm |
| Pressure | PN16 |
| Dimensions | |
| Diameter | 5,2 mm |
| Length | 45 mm |
| Material | |
| Sensor tube | inconel |
| Cable | |
| Length | 2 m |
| Resistance | 0,2955 Ω (2-wire cable) |
| Typy | Silicone, PUR or PVC |

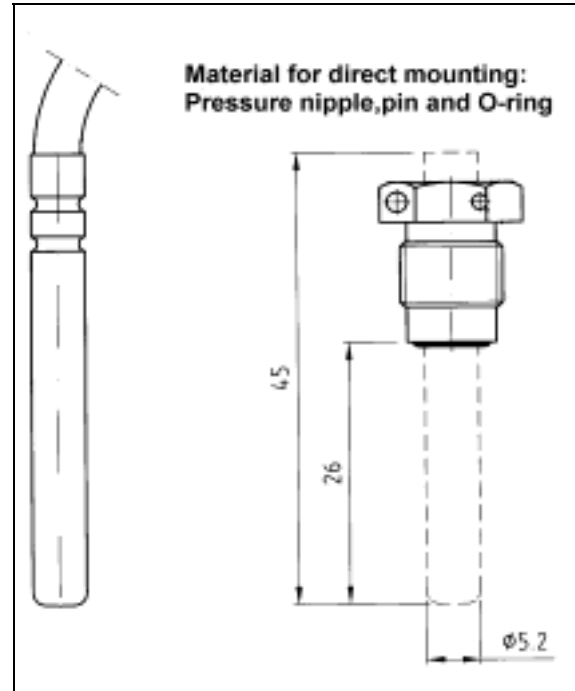
Type approval

| | | |
|---------|-----|---------------------------|
| Swedish | SP | SP WT 98:01 P 15 42 02 |
| German | PTB | 22.70/99.06 |

Accessories

| | | |
|---|---|--------------|
| Mounting kit for direct mounting | | |
| MK-01 | Pressure nipple (M10) pin and O-ring | |
| Valves and T-pieces | | |
| <i>Material</i> | Chromium plated brass | |
| PN16 | | |
| Thread | M10 x 1 internal | |
| TT15B | T-piece BSP 1/2" | length 56 mm |
| TT20B | T-piece BSP 3/4" | length 64 mm |
| TV15B | Ball valve BSP 1/2" | length 56 mm |
| TV20B | Ball valve BSP 3/4" | length 64 mm |
| TV25B | Ball valve BSP 1" | length mm |
| TA15B | Adapter 1/2" | M10 |
| TA20B | Adapter 3/4" | M10 |
| Pockets | | |
| <i>Material</i> | <i>steel</i> | |
| TP34 | Pocket l = 34 mm; minor diam = 5,2 mm | |
| TP50 | Pocket l = 50 mm; minor diam.= 5,2 mm | |
| <i>Material</i> | brass | |
| TP34B | Pocket l = 34 mm; minor diam = 5,2 mm | |
| TP50B | Pocket l = 50 mm; minor diam.= 5,2 mm | |
| TP70B | Pocket l = 70 mm; minor diam.= 5,2 mm | |
| TP85B | Pocket l = 85 mm; minor diam.= 5,2 mm | |
| TP120B | Pocket l =120 mm;minor diam.= 5,2 mm | |
| <i>Material</i> | <i>stainless steel</i> | |
| TP85S | Pocket l = 85 mm;minor diam.= 5,2 mm | |
| TP120S | Pocket l = 120 mm; minor diam.= 5,2 mm | |
| <i>Material</i> | plastic | |
| Z10-01B | Adapter (blue) for TL045 in pockets | |
| Z10-01R | Adapter (red) for TL045 in pockets | |
| Z10-02 | Adapter for pocket - 22-D32 | |
| Z10-06 | Adapter (blue) for sealing screw in pocket - T210-0-311/321 | |
| Z10-07 | Adapter (red) for sealing screw in pocket - T210-0-311/321 | |

Dimensions (mm)



TL045 with and without the mounting kit

Ordering key

| | | | | | | | | | | | |
|----------------------------------|---------------|---|---|--|--|--|---|---|--|---|---|
| | | | | | | | | | | | |
| | 0 | | | | | | | | | | |
| Temperature sensor | typ | T | | | | | | | | | |
| For mounting in pocket | L | | | | | | | | | | |
| For direct mounting | D | | | | | | | | | | |
| The sensor length in mm | 0 | 4 | 5 | | | | | | | | |
| Measuring element | Pt100 | | | | | | | | | | |
| Measuring element | Pt500 | | | | | | | | | | |
| Type of cable | | | | | | | | | | | |
| straight | max. 140°C | | | | | | | | | | |
| spiral | max. 90°C | | | | | | | | | | |
| Cable length in dm | | | | | | | | | | | |
| straight | (standard 20) | | | | | | x | x | | | |
| spiral | (standard 15) | | | | | | 2 | 0 | | | |
| | | | | | | | 1 | 5 | | | |
| Cable material | | | | | | | | | | | |
| PVC | (max. 90°C) | | | | | | | | | X | |
| Silikon | (max. 180°C) | | | | | | | | | Y | |
| PUR | (max. 90°C) | | | | | | | | | Z | |
| Paired sensors | (0 - 90°C) | | | | | | | | | | |
| Paired sensors | (20 - 140°C) | | | | | | | | | | C |
| Paired sensors | (0 - 140°C) | | | | | | | | | | N |
| Unpaired sensors | | | | | | | | | | | T |
| | | | | | | | | | | | U |
| Country code (see art. Register) | | | | | | | | | | | # |
| Standard | | | | | | | | | | | 0 |
| Special | | | | | | | | | | | S |

TL045 / 03/2006



A causa del continuo sviluppo del prodotto la ELSTER Contatori si riserva di modificare la presente pubblicazione senza preavviso.

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